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DISCLOSURE TEXT:

1p. In mounting integrated circuit chips on ceramic substrates there are basically two modes. One mode is the so-called flip-chip bonding, and the other is wire bonding. The present technique combines these two modes in an efficient and effective way to utilize

both modes in a minimal space.

- The figure, which is a sectional view, shows chips mounted

according to this technique using both wire bonding and flip-chip

technology. A pair of chips 10 and 12 are bonded together, preferably by an epoxy, in back to back relationship. The chip 10 is

configured for flip-chip bonding, and the chip 12 is configured

for

wire bonding. The chip 10 is mounted to a ceramic substrate 14 by

conventional solder joints 16. Pads 18 are arranged under the chip

10 which provide both mechanical and electrical connections for the

chip 10. The chip 12 is bonded by wires 20 to raised terminals 22

around the chips 10, 12.

- A bellows-type heat sink, shown at 24, may be employed in

conjunction with a conventional metal cap 26 for packaging the substrate.

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